RF 128.1259USN 12-May-06

- 3 -

In the claims:

Please amend the claims as shown below:

1. (Currently amended) A method for continuous alkali oxygen 5 delignification of digested cellulose pulp and of cellulose pulp that has been washed after digestion, comprising: whichstoring pulp is stored in a storage tower or pulp chute at essentially atmospheric pressure, and that 10 maintainings a medium consistency of the pulp in athe range of 8-18%, and that maintainings the cellulose pulp to be delignified at a kappa value of at least 15 units,7 preferably a kappa-exceeding 20 units, where the oxygen delignification takingtakes place in a reactor system with 15 several oxygen reactors with a predetermined retention time of the cellulose pulp in the reactor system, where adding alkali is added to the cellulose pulp in order to obtain an initial pH exceeding 9.0 and addingwhere oxygen is added to the cellulose pulp at an amount of 5-50 kg per tonne of pulp at a position before a first oxygen reactor in the 20 reactor system, providingand where the pulp withhas a predetermined total retention time of greater than 45 minutes in the reactor system, characterised in that, in association with anthe addition of the necessary chemicals chemicals and an initial mixing-in operation, 25 placing the cellulose pulp is placed under pressure at an initial pressure of greater than 15.0 bar, subjectingafter which the pulp is subject to more than one remixing position where athe final pressure after athe final remixing position is at least 13 bar, subjecting the pulp 30 toand with a minimum retention time in a highin this first high pressure section of at least 3-10 minutes, reducingafter which the pressure of the pulp is reduced to a pressure that lies under 10-12 bar, heating the pulp with

5

10

20

25

- 4 -

and is heated by steam such that athe temperature of the pulp is raised by at least 5 °C by the addition of steam, and leadingfollowed by the heated pulp being led to a reactor system in a low pressure section with a retention time that exceeds the retention time in the high pressure section.

- 2. (Currently amended) The method according to claim 1, that a racterised in that wherein oxygen, preferably the major part of the oxygen added for the oxygen stage, is added to the cellulose pulp immediately after the initial pressure of more than 15 bar has been established.
- 3. (Currently amended) The method according to claim 2,

 tharacterised in that wherein the remixing positions are constituted by fluidising mixers, either in athe form of a fluidising pump, a fluidising restriction, a fluidising mixer or a restriction in athe flow that results in a fall in pressure of less than 1 bar.
 - 4. (Currently amended) The method according to claim 3, characterised in that wherein a first high pressure reactor is located after the initial mixing-in operation, in which reactor the cellulose pulp is given a first retention time of t₁, and in that a high pressure reactor follows after the remixing positions in the high pressure section after each one of the remixing positions.
- 5. (Currently amended) The method according to claim 4,

 characterised in that wherein the reactors in the high pressure section are dimensioned such that the cellulose pulp is given successively longer retention times, such that wheniff the number of reactors is X, the retention times are t₁ t_x for each relevant reactor R₁ R_x, where t₁<t₂<...t_x.

RF 128.1259USN 12-May-06

6. (Currently amended) The method according to claim 5, characterised in that wherein the retention times t_1 – t_X in the reactors R_1 – R_X in the high pressure section are expressed as

 $t_{min}=1$ minute for t_1 , after which $(t_{x}=2\ *\ t_{x-1})$ and $T_{max}=X\ *10$ minutes;

 $(t_1 = 1 - 10 \underline{\text{min.}}, t_2 = 2 - 20 \underline{\text{min.}}; t_3 = 4 - 30 \\ \underline{\text{min.}}; t_4 = 8 - 40 \underline{\text{min.}}; etc.),$

10 where $t_X < t_{X+1}$.

5

15

- 7. (Currently amended) The method according to any one of the preceding claims, characterised in that claim 1 wherein a stirrer is present in at least one high pressure reactor, which stirrer acts in athe principal part (greater than 50%) of athe reactor volume, either in athe form of a mechanical stirrer (S) or hydrodynamic stirrers that at least circulate free fluid in the reactor.
- 8. (Currently amended) The method according to any one of the preceding claims, characterised in that claim 1 wherein at least one of the oxygen and and alkali additions are can be added to the cellulose pulp in association with the remixing positions in the high pressure section at an amount that is lower than the amount that is added at the initial mixing-in operation, and in that at least one of the oxygen and alkali additions are can be added batch wise at athe beginning of the low pressure section.
- 9. (Currently amended) The method according to any one of the preceding claims, characterised in that claim 1 wherein the cellulose pulp is dewatered before the oxygen delignification to a higher consistency and in that it the cellulose pulp is re-diluted before the oxygen delignification to a medium consistency with pure filtrate

RF 128,1259USN 12-May-06

- 6 -

that has preferably been previously oxidized, and in that alkali in athe form of oxidized white liquor is used in the oxygen delignification.

5